

ORTHOPTERA AROUND BIRMINGHAM

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BETWEEN October 1979 and July 1986, I lived in Birmingham and was able to devote some spare time to the study of Orthoptera and other insects in and around that city. Here, I present a summary of my knowledge of the Orthoptera to be found around Birmingham. A study of the geographical distribution of Orthoptera will be of value to entomologists who specialise in other orders of insects: Orthoptera serve as useful indicators of particular types of habitat.

The area chosen for discussion comprises the four old counties of Worcestershire, Warwickshire, Staffordshire and Shropshire (Watson-Praeger vice-counties 37, 38, 39, 40). At its centre lies the Birmingham-Black Country - Wolverhampton conurbation which, since local government reorganisation in 1974, approximates to the new county of West Midlands. The four vice-counties contain the majority of sites which form the traditional collecting grounds of Birmingham entomologists.

Literature on midland Orthoptera is sparse: Lucas (1920) gives a few records; Fincher (1953, 1955, 1964) gives valuable accounts, especially of the Bromsgrove district; Ragge (1965) provides vice-county maps. Marshall and Haes (1989) provide the most recently published source of distribution maps plotted on a 10km square basis. Mr Haes has kindly shown me updated unpublished maps (pers. com. 1989) which show further records held by the Biological Records Centre but there are still gaps in the coverage of many species. An exciting development over the last few years has been the creation of the Warwickshire Orthoptera Survey — an atlas of the county's Orthoptera has been compiled by Mrs Pamela Copson of Warwick Museum (Copson, 1984).

Compared with the southern and coastal parts of Britain, the English Midlands have a poor orthopterous fauna. When I moved from Bristol to Birmingham in 1979, I was struck by the lack of insect noise on warm evenings: the Dark Bush-cricket, *Pholidoptera griseoptera*, which is so common in the south is confined to a few favoured localities in the Birmingham district. Indeed, I would often travel south — to Oxfordshire or the Cotswolds and beyond — to see species that are scarce or absent near Birmingham. Nevertheless, there are some splendid localities in the West Midlands, rich in Orthoptera and other aspects of natural history, some being of national importance.

Unless otherwise stated, the following records and observations are my own and were made between October 1979 and July 1986. Furthermore, various entomological friends have told me of their findings.

Species

1. Oak Bush-cricket, *Meconema thalassinum* (De Geer)

This insect is generally widespread in woods, hedges and isolated trees to the south of Birmingham but there are few records for Staffordshire. Despite beating the branches of numerous trees in the Birmingham suburbs, I have never seen it within the city but it can be found a few miles to the south in the complex of woods around Chaddesley Corbet. Despite a record from near Rugeley in Staffordshire, my own searches of oaks near Cannock Chase have been fruitless. The Warwickshire survey shows it to be well distributed in that county.

WORCS: Pepper Wood, female, on oak, 3.x.1985; Santery Wood, male, two females, from oak, two females from willow, 3.x.1985; Monk Wood, male, on bramble, 22.ix.1985; Trench Wood, nymph, 1986, M. Bryan; Linthurst Newtown, on laurel, c..1982, M. Bryan; Randan Wood (Fincher, 1953); Shrawley Wood (Fincher, 1953); Wribbenhall, Bewdsley (Fincher, 1955).

WARKS: Widespread throughout the county except for the West Midlands conurbation (Copson, 1984).

STAFFS: Madeley (Daltry, 1933); Mr R. Hill (pers. com., 1985) was told of the capture of a specimen near Rugeley; Mr R. Norman captured and released a specimen, which he presumes to have been this species, in woodland at Chillington Park in the early 1980s. A specimen was collected by Richard Clinton at his home in Little Aston, where it had been attracted to light, on 5.viii.1989 (M. Bryan, pers. com.).

SALOP: Wyre Forest, sluggish female and two dead in cobwebs, 17.x.1981; Alverley, on maple, 1980s, R.G. Kemp; Much Wenlock and Blakeway Coppice (Smith, 1984).

2. Dark Bush-cricket, *Pholidoptera griseoaptera* (De Geer).

This insect is locally common in wooded parts of Worcs, its range of distribution extending into the western parts of Warks and along the Severn into Salop. There is no Staffs record.

WORCS: Monk Wood, common, 22.ix.1985; Bewdley, stridulating males on bank of River Severn, 2.ix.1984 and 24.ix.1985; Ribbesford, stridulating male on bank of River Severn, 1985; Trench Wood, stridulating males, 1984; south-west of Bromsgrove (Fincher, 1953); between Stourport and Holt Heath (Fincher, 1953); Linthurst Newtown, M. Bryan, 1980s.

WARKS: Moreton Bagot (Fincher, 1953); Lowsonsford, N.J. Court, 11.ix.1987; Red Hill House, Alcester, D. Musson and J.A. Hardman, 1980; Temple Grafton, Weathley Wood and Exhall, R.J. Jukes, 1984; Alcester to Broom, disused railway line, M.W. Finnemore, 3.ix.1986.

STAFFS: No record.

SALOP: Quatford, one male on bank of River Severn, 25.ix.1985; Alverley, R.G. Kemp, 1980s.

(Lucas (1920), records this species from Repton Shrubs, Derbyshire. I visited this site on a warm afternoon in September 1984 but failed to find the species, despite the presence of visually suitable habitat. Evans (1970), records the Dark Bush-cricket from Owston Woods, Leics. I found it to be still present there on 29.viii.1984.)

3. Grey-winged Bush-cricket, *Platycleis albopunctata* (Goeze)

Kevan (1951, 1952) refers to the capture of a specimen of this normally coastal species at Ettington, near Stratford-on-Avon. There has been no recent record of this insect in the Midlands and the Ettington record cannot be easily explained.

4. Bog Bush-cricket, *Metrioptera brachyptera* (L.)

This is a very localised insect in the midland counties.

WORCS: No record.

WARKS: Near Stonebridge (Kevan, 1961); Bickenhill Plantation, in tall grass, Jeremy Rhodes, 4.ix.1986 — a specimen has been deposited in Warwick Museum and identification confirmed by Mrs Pamela Copson [2 nymphs, May 1990, J.P.].

STAFFS: Camp Hill, Maer Woods (Daltry, 1933; Kevan, 1954); Oldacre Valley, Cannock Chase, 24.ix.1983; Penkridge Bank, 5.viii.1984 and 10.viii.1985 (Paul, 1986); Sherbrook Valley, Cannock Chase, 1983 and Penkridge Bank, 1984 (R. Hill, pers. com., 1985); Sher Brook, Cannock Chase (Clements, 1987); Highgate Common, small colony found by Mr A. Moffet and confirmed by Mr R. Hill (R. Hill, pers. com., 1990).

SALOP: Whixall Moss (Elton, 1947; Fincher, 1953). I have found it on several visits to Whixall Moss during the 1980s; Cramer Gutter, 2.ix.1984 and 17.viii.1985.

(Lucas (1920), records this species doubtfully from Repton Shrubs, Derbyshire. I failed to find the species there in 1984.)

5. Speckled Bush-cricket, *Leptophyes punctatissima* (Bosc.)

This species is widespread in the midlands and appears to be more common in the south of the region under discussion. It is more easily overlooked than many other species of Orthoptera since the chirp of the male is scarcely audible at any distance.

WORCS: Widespread (Marshall and Haes, 1989); Monk Wood, 1980s, M. Bryan; Brotheridge Green, near Malvern and Wyre Forest (Fincher, 1964).

WARKS: Many records from centre and south of county, 1980s (Copson, 1984).

STAFFS: No record.

SALOP: Marshall and Haes (1989).

6. House Cricket, *Acheta domesticus* (L.)

The introduced House Cricket is now especially associated with hospitals in Britain, although as recently as 1953, Fincher described it as "Frequent in

bakehouses, farms and rubbish tips at many places in north Worcs." During hot weather in may stray outdoors. In cold weather, it may be heard singing around hospital radiators and hot pipes.

I have heard it at the following hospitals in and around Birmingham: Queen Elizabeth Hospital, Birmingham, 1979-85; Dudley Road Hospital, 1983; Rubery Hill Hospital, 1984; Selly Oak Hospital, 1984; East Birmingham Hospital, 1984; Walsall Manor Hospital, 1986. I have heard it singing also at Birmingham Medical School, 1979-85 and the City General Hospital, Stoke-on-Trent, 1985. Several records from central Warks, 1980s (Copson, 1984).

7. Mole Cricket, *Gryllotalpa gryllotalpa* (L.)

On a visit to Stoke-on-Trent City Museum in 1985, Mr G. Halfpenny kindly showed me a preserved adult mole cricket which had recently been captured in Stoke. It seems probable that this insect had been imported amongst foreign vegetables. At the time of writing, I am informed of a record of this elusive insect that has recently been reported to E.C.M. Haes by John Burton; it seems that Mole Crickets were heard in a water meadow near Wyre Piddle, Worcestershire by Dr R.W. Payne until 1985, when the meadow was ploughed up to grow barley. Lucas (1920) mentions old records from Birmingham.

8. Slender Groundhopper, *Tetrix subulata* (L.)

Widespread to the south of Birmingham.

WORCS: Castlemorten Common (Fincher, 1955); Phepson, by pond, 1.v.1986; Dean Brook, near Saleway, 1.v.1986; Stanford Bridge, by River Teme, 29.iv.1984; Sinton, by lake, 29.v.1984; Monk Wood, M. Bryan, 1983.

WARKS: Ufton Fields, S. Shaw, 12.v.1962; Brandon Marsh, J. Maskrey, 1983; J. Paul, 1.ix.1983; Stockton Cutting, P.J. and K.M. Reeve, 18.ix.1983; J. Paul, 7.vii.1984; Traitor's Ford, J.A. Hardman and J. Paul, 11.viii.1984; Ryton Picnic Site, P.J. Copson, 14.viii.1984; Ufton Hill Farm, Toft Farm, Stockton Cutting, Draycote Water and Ufton Fields, P.J. and K.M. Reeve, 1984; Hams Hall, under piles of wood, W.J. Hough, 26.x.1985; Brandon Marsh, Ryton Wood, Coombe Abbey and Wainbody Wood, S.A. Lane, 1986; Weddington Railway Sidings, Warnact Survey Team, 1.vii.1985; Harbury Quarry, C.J. Palmer, 11.v.1985.

STAFFS: No record.

SALOP: No record, but is known from the Clwyd bank of the River Dee, where it was discovered by Mr Ian Wallace, in May, 1983 (Haes, 1983). The opposite bank of the river is in Shropshire and it is probable that *T. subulata* occurs there also.

9. Common Groundhopper, *Tetrix undulata* (Sowerby)

This species sometimes occurs with *T. subulata*. The two species are

difficult to differentiate as nymphs which may occasionally result in inaccurate records.

WORCS: Wyre Forest, on railway cutting, vi.1981; Trench Wood, 1984 and 1987; Randan Wood and Purshill Green (Fincher, 1953).

MARKS: Waverley Wood, H.W. Daltry, 25.iv.1951; Bickenhill (Fincher, 1953); Snitterfield Bushes, D. Musson, 13.viii.1984; Herald Way tip, Wappenbury Wood, Ryton Wood, and Wainbody Wood, S.A. Lane, 1986; Earlswood Lakes Station, Danzey Green Station and Weddington Sidings, Warnact Survey Team, 1985.

STAFFS: Dovedale and Burnt Woods (Daltry, 1933); Chartley, dry field, 24.ix.1983; Wilbrighton, disused railway, 26.v.1986.

SALOP: Whixall Moss, 26.vi.1981, vii.1983, vii.1984, 6.vii.1986; Cramer Gutter, 2.ix.1984; Bell Coppice and Sturt Common, 27.v.1986; Alverley, bank of River Severn, 23.v.1986.

10. Stripe-winged Grasshopper, *Stenobothrus lineatus* (Panzer)

Ragge's vice-county maps (1965) include Herefordshire for this insect on the strength of a record from the Malvern Hills. The specimen on which this record is based has been examined by G.B. Collins, and is in the British Museum (Natural History). It is a macropterous example of *Chorthippus parallelus* and there is therefore no evidence that this species occurs in the area under discussion (Haes, 1985).

In Britain, *S. lineatus* may be found on calcareous grassland, sandy heathland and sand dunes. Despite searches of the Broadway district and Bredon Hill in Worcestershire and of Ufton Fields, Edge Hill and other visually suitable habitat in Warwickshire, the author has failed to find it in the region. Strong colonies exist on the Cotswolds in Gloucestershire (e.g. Cleeve Hill) just south of the Worcestershire border.

11. Common Green Grasshopper, *Omocestus viridulus* (L.)

A widespread and locally common grasshopper which is, however, scarce in urban areas and regions that are intensively farmed.

WORCS: Headley Heath, Rubery Hill, 23.vii.1984; Frankley, roadside, vii.1984; Wyre Forest; Malvern Hills; Bredon Hill, 29.ix.1985.

MARKS: Geary's Heath, Coleshill Bog, 8.ix.1985; Edge Hill, viii.1984; Farnborough, viii.1984; Sutton Park; Solihull, Riverside Drive; Edgbaston, The Vale, slope by Ridge Hall, 2.vii.1980; Edgbaston, Vincent Drive, waste ground, scarce [Bickenhill Plantation, May 1990, nymphs].

STAFFS: Hollies Common, 11.ix.1985; Cannock Chase, Anson's Bank, Sycamores Hill, Satnall Hills, Penkridge Bank; Highgate Common, Forest Covert; Wyrley Common, 26.viii.1985; Pelsall Common; Chartley, dry field.

SALOP: Cramer Gutter, 2.ix.1984 and 17.viii.1985; The Wrekin; Whixall Moss; Cockshutford, 17.viii.1985; Cleobury North Liberty, 17.viii.1985;

Offa's Dyke, near Knighton, 27.viii.1985; Bomere, vii.1986; Long Mynd, Wild Moor and by gliding club 9.viii.1986; Plowden, 9.viii.1986.

12. Common Field Grasshopper, *Chorthippus brunneus* (Thunberg)

Generally common, except damper pastures and heaths. It is the only common grasshopper in Birmingham itself, where there are many large colonies on waste ground, roadsides, edges of carparks, railway land and canal cuttings.

WORCS: Selly Oak, by railway station; Stirchley, roadside; Lilford; Walker's Heath; Weatheroak Hill; Rednal, SO 997768 and SP 001760, ix.1981; Lickey Hills, SO 987757, ix.1981; Beacon Hill; Cofton Hill; Rubery Hill; Frankley, roadside; Randan Wood; The Four Stones, Clent Hills; Walton Hill; Hartlebury Common; Kidderminster Rifle Range; Wren's Nest; Malvern Hills; Trench Wood; Stourbridge, by railway, SO 909832, vii.1981; Turner's Hill, Darby's Hill; Winson Green; Sandwell, Bredon Hill.

MARKS.: Kingsbury Water Park; Whateley; Sutton Park; Solihull, Riverside Drive; Barber's Coppice; Bickenhill; Stonebridge; Geary's Heath; Bradnock's Marsh; Eastcote; Old Snowhill Station; Edgbaston -The Vale, SP 053847, x.1979; Vincent Drive; Birmingham University campus, SP 044835, x.1979, x.1980 and SP 044834, ix.1982; Queen Elizabeth Hospital, SP 041838, viii.1981 and SP 044838, ix.1982; Tredington, vii.1984; Little Compton, vii.1984; Long Compton, viii.1984; Traitor's Ford, viii.1984; Edge Hill, viii.1984; Farnborough, viii.1984; Burton Dassett, viii.1984; Stockton, Coleshill Bog; Brandon Marsh, ix.1983.

STAFFS: Dovedale (Daltry, 1933); Gorsey Leas; Alrewas; Burton-on-Trent; Weeford, Chartley; Cannock Chase - Spring Hill, Satnall Hills, Anson's Bank, Sycamores Hill, Abraham's Valley, Penkridge Bank; Wyrley Common; Chasewater; Pelsall Common; Whittington Heath; Doxey Marshes; Queensville; Broad Meadow; Kinver Edge; Halfpenny Green; Forest Covert; Highgate Common; Short Heath.

SALOP: The Wrekin, Long Mynd, near gliding club on roadside; Plowden.

13. Meadow Grasshopper, *Chorthippus parallelus* (Zetterstedt)

Generally common outside urban areas.

WORCS: Hopwood; Randan Wood; Chaddesley Wood; Fenny Rough; Bewdsley; Kidderminster Rifle Range; Malvern Hills; Trench Wood; Weatheroak Hill; Bredon Hill.

MARKS: Tredington; Little Compton; Long Compton; Traitor's Ford; Edge Hill; Burton Dassett; Stockton; Coleshill Bog; Sutton Park.

STAFFS: Churnet Valley; Chartley, dry field; Wyrley Common; Weeford. Norbury; Cannock Chase; Sher Brook (Clements, 1987).

SALOP: Whixall Moss; Cramer Gutter; Offa's Dyke, near Knighton; Brightall Common; Quatford; Bomere; Long Mynd; Wild Moor.

14. Lesser Marsh Grasshopper, *Chorthippus albomarginatus* (De Geer)

During the 1980s as a result of efforts of those contributing to the Warwickshire Orthoptera Survey, it has been realised that this insect is widespread and locally common in a variety of habitats in Warwickshire (Copson, 1984; Paul, 1984). The first 1980s record was from Brandon Marsh (SP 3875), near Coventry, where it was found by S. Lane. It would seem that the species has been overlooked, as Mr J.A. Hardman found a specimen in his collection with data: Warwick, 4.viii.1954. The Lesser Marsh Grasshopper is known from southern Worcestershire, but is unrecorded from Shropshire and Staffordshire.

WORCS: Marshall and Haes (1989).

MARKS: Records include: Warwick, 4.viii.1954, J.A. Hardman; Brandon Marsh, 27.viii.1982, S. Lane and 17.ix.1983, J. Paul; John Eastwood Farm, Stoneleigh Ley (SP 333707), 25.viii.1983, P. Copson; Newbold Comyn, Leamington Spa, grassland (SP 339653), 19.ix.1983, R. Gibb; Bypass embankment (SP 272668), x.1983, Myles Mackay; Little Wolford (SP 2633), 30.vii.1984, Paul Marriott; Ufton Fields, 7.vii.1984, J. Paul; Monkspath Meadow (SP 1475), 11.vii.1984, J.W. Lewis; Pillerton Hersey Home Farm (SP 297493), 12.viii.1984, Robert Pitt; Parkhill Coppice (SP 247517), 14.viii.1984, J.W. Lewis; Near Oaks Wood, C.A.D. Kineton, grassy, calcareous ride (SP 348488), 1.viii.1984, M.W. Finnemore; Stretton-on-Dunsmore, churchyard (SP 406726), 14.viii.1984, P. Copson; Bishopston (SP 189569), 13.viii.1984, Dave Musson; Bearley Bushes, scrubby woodland (SP 189604), 2.ix.1984; The Oaks, Kineton (SP 350490), 3.vii.1984, J.W.L., D.B., M.W.F.; Heath Farm, road verge (SP 225528), 14.viii.1984, J.W.L., D.B.

STAFFS: No record. I have made fruitless searches in likely-looking spots, such as Doxey Marshes and Queensville, near Stafford and Broad Meadow, near Tamworth.

SALOP: No confirmed record.

15. Mottled Grasshopper, *Myrmeleotettix maculatus* (Thunberg)

Midland colonies of this insect seem to be confined to heaths, peat moors and long-abandoned slag heaps. It is often found in association with other local species and is therefore a useful indicator of good habitat for scarce insects.

WORCS: Kidderminster Rifle Range (26.viii.1985; 10.vii.1987); Hartlebury Common (1985); Rubery Hill (23.vii.1984); Malvern Hills -North Hill, Linden, Herefordshire Beacon (vii.1984), The Gullet (4.vii.1987).

MARKS: Sutton Park, 18.ix.1982; Grendon Heath, J.D. Rhodes, 10.ix.1986.

STAFFS: Cannock Chase, 24.ix.1983 — Anson's Bank, Sycamores Hill, Satnall Hills; Penkridge Bank, viii.1984; Highgate Common, 25.ix.1982; Forest Covert; Kinver Edge, 25.ix.1982; Whittington Heath, 8.ix.1985; Wyrley Common, 26.viii.1985; Chasewater, 26.viii.1985; Pelsall Common, 6.ix.1985; Apedale (R. Hill, pers. com., 1990).

SALOP: Wixall Moss, 6.vii.1986; Cramer Gutter, 2.ix.1984 and 17.viii.1985; Prees Heath, 6.vii.1986; Wrekin; Alverley, slag heap, vii.1986; Clee Hill, 9.viii.1986; Long Mynd, 9.viii.1986; Plowden, 9.viii.1986.

(To be concluded)

Second brood *Spilosoma lubricipeda* L., the White Ermine (Lep.: Arctiidae) in Ayrshire

A single male of *S. lubricipeda* was caught in the Rothamsted Insect Light Survey (R.I.S.) light trap at Culzean Castle, Ayrshire (Site No. 264, OS grid ref. NS 235 095) on 10.ix.1990. This individual represents a partial second emergence: first brood moths were caught in the trap between 5.v. and 4.vii.1990. Reference to the R.I.S. database shows that *S. lubricipeda* usually flies between mid-May and mid-July at this site, though first brood individuals have been caught between 8.v.(1981) and 5.viii.(1979). Despite 15 years of continuous trapping at Culzean Castle, the only other instance of a second emergence is recorded on 5.ix.1975.

Skinner, B. (*Colour Identification Guide to Moths of the British Isles*, Viking, Harmondsworth, 1984) and others state that there is an occasional second emergence of this species. Examination of the R.I.S. database confirms this. From a total of over 40,000 *S. lubricipeda* records, there are 27 captures of second brood individuals. Apart from four Scottish records, three of which were during the hot summer of 1976, these are all from Wales and England south of Lancashire and Lincolnshire. Seven (approx. one third) were from Kent, Hampshire and the Channel Islands.

From these records it appears that bivoltinism in *S. lubricipeda* is unusual and occurs mainly in southern localities. In Scotland a second emergence is rare and usually restricted to hot summers such as 1976 and 1990. Continued monitoring of bivoltinism in this species may reveal responses to predicted climatic change.

Thanks are extended to G. Riddle for operating the trap at Culzean Castle.— ADRIAN M. RILEY, AFRC Farmland Ecology Research Group, Dept. Entomology and Nematology, Rothamsted Exp. Stn., Harpenden, Herts AL5 2JQ.